AMMP BULLETIN

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CENTRE ACTIVITIES

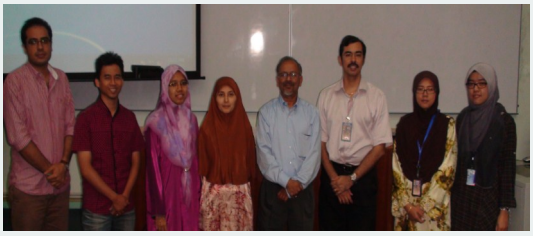
Seminar by Visiting Professor, Prof Dinesh Agrawal from Pennsylavania State University

5th July 2012 at DK5, Engineering Tower, Faculty of Engineering – AMMP CENTRE arranged two free seminars by Professor Dr Dinesh K.Agrawal, Visiting Professor. The first seminar on "Publish High Quality ISI Papers and Writing Techniques" attracted more than 50 audience from various faculties. The seminar was held for 1 hour 30 minutes and participants were eagerly asking question on the topic. The tips given were very useful in writing papers. AMMP CENTRE collaborated with IMechE in arranging the second seminar which was focused on Microwave Processing of Various Materials – Global perspective and Current Status. The 2 hours and 30 minutes talk was fully informative and resisted the participants from leaving the hall. At the end of session, Prof Ir Dr Ramesh Singh presented a token of appreciate to our visiting professor.

Token of appreciation by Prof Ir Dr Ramesh Singh

Seminar by Visiting Professor, Prof Dr Sarit Bhaduri from Toledo University, USA

24th & 25th July 2012 at DK5, Engineering Tower, Faculty of Engineering – AMMP CENTRE arranged free seminars by Visiting Professor, Prof Dr Sarit Bhaduri from Toledo University, USA. The first day seminar focused on "Publishing High Quality ISI Papers and Writing Techniques" attracted participants from various faculties. The seminar was held for 1 hour 30 minutes and participants were kept update on the techniques on writing papers. The tips given were refreshed in participants mind all the time by giving frequent seminars. The second day seminar was a collaboration of AMMP CENTRE with IMechE focused on Synthesis and Applications of Calcium Phosphates in Bionanotechnology for two hours. At the end of session, Prof Ir Dr Ramesh Singh presented a token of appreciation to our visiting professor.



Participants with Prof Dr Sarit Bhaduri

Workshop On "How to Effectively Conduct a Research"

11th & 18th July 2012 at Postgraduate Lab, Faculty of Engineering – AMMP CENTRE organized 2 days free workshop for its postgradutes and research assistants.The objective of this workshop is to give exposure to AMMP Centre members in conducting a high quality research effectively. The program compromise of application and usage of Endnote, Dropbox, Microsoft Word-Styles, Minitab, Writing tips, Thinking skills, turnitin, Google plus, Image J and ISI Web of Knowledge. These 2 days fully informative workshop has given participants on overview how to start and conduct individual research in proper managed way. AMMP Centre in future will be giving out more trainings for their members and students to keep the research spirit burning.

Participants with Dr Azizi after closing speech

SUMMARY CURRENT RESEARCH

Investigation on cadmium-free brazing filler metals based Ag-Cu-In and Ag-Cu-Sn Systems

Low-silver brazing alloys are well known as best suited filler materials for joining metals and alloys, except aluminium and magnesium. In this alloy family, the alloys based on Ag-Cu-Zn-Cd system are brazing filler metals widely used for general purposes. The addition of cadmium to silver-copper-zinc system reduces the solidus temperature and the melting range; reduces silver content; and improves the fluidity of the alloys. However, the problem associated with cadmium –containing filler metals is the toxic fume generated during the brazing operation. Cadmium in silver brazing filler metals also has high vapour pressure which is unsuitable for vacuum brazing. Therefore, many attempts have been made to solve the problem of cadmium fume and to produce cadmium-free alloys that have similar characteristics of high fluidity and low melting point as those of cadmium-bearing alloys. The aim of this research is investigate the performance of Ag-Cu-Sn and Ag-Cu-In system filler metals as an alternative for existing cadmium content filler metals.

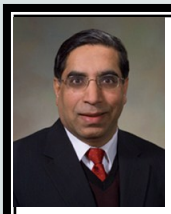
Researcher;
Basri Din Kamar

A study on brazing of Sapphire and Inconel for the application of gas pressure sensor

The developments of high temperature pressure sensor required the material that can withstand at high temperature and high corrosion resistance. Recently, oil filled silicon piezo-resistive pressure sensor have been widely used in various applications such as in aerospace and automotive industry. Although the performance of oil filled type silicon pressure sensor already proven, such as high working temperature, anti-corrosion, cleanliness, small size and low cost; this pressure sensor need to be protected by an additional anti-corrosion film deposition from sensing media in order to prolonged it services. The new technological developments of the sensors based on sapphire have been proven can replace the oil filled type pressure sensor with oil free type with the simple and small sensor design. Sapphire is one of the ceramic that are commonly used as sensor in electronic devices, aerospace and automotive industries especially in gas sensor application that usually need to work at high temperatures and in aggressive oxidizing or reducing gas media. Furthermore, by using sapphire-based sensor, the reading accuracy could be increased up to 0.001% of FS/° C or less without any thermal compensation.

Researcher;
Tuan Zaharinie Tuan Zahari

VISITING PROF PROFILE



Prof. Dr Dinesh K. Agrawal
Professor of Engineering Science & Mechanics, and Director of Microwave Processing and Engineering Center, The Pennsylvania State University .

PhD (Solid State Science): The Pennsylvania State University (Nov 1979)
M.Tech. (Materials Science): Indian Institute of Technology, India (Aug 1975)
M.Sc. Physics (Solid State): Hindu University, India (July 1972)
B.Sc. Phys., Chem., Maths: Banaras Hindu University, India (July)1970

- Research Areas: Microwave processing of ceramics , composites, metals, Low thermal expansion materials, Ceramic processing and Rad-waste management
- Given over 200 invited and keynote lectures in industry, academia and technical meetings all over the world.
- Honored for contribution to ceramic research by World Academy of Ceramics for inducting him in the Academy
- Elected as the Fellow of American Ceramic Society.
- Author of over 300 publications and 21 patents to his credit.
- ISI h-index is about 26.
- Visit to AMMP in early of July 2012

Prof. Dr. Sarit B. Bhaduri
Professor & Director in Department of Mechanical, Industrial, and Manufacturing Engineering, Department of Surgery
University of Toledo, Toledo

PhD (Materials Science & Eng): State University of New York, Stony Brook (S.U.N.Y.), 1981.
M.S. (Physics): Indian Institute of Technology, Kharagpur 1976.
B.S (Physics (Honors)),: Indian Institute of Technology, Kharagpur 1974.

- Research Areas: processing and evaluation of Nano crystalline Materials, Biomaterials, Biomimetic Coatings
- Projects supported by Federal (NSF, NASA, Army and Navy), State (Idaho and Ohio), and industrial sources.
- 145 publications and approximately 5 book chapters.
- Has total of 12 patents (4 US patents issued, with 3 applications pending).
- Fellow of the American Ceramic Society
- Nominated as a candidate in the College of Fellows of the American Institute Medical and Biological Engineering
- Visit to AMMP in end of July 2012

UPCOMING EVENTS

□ Postgraduate Seminar on "How to Conduct High Impact Research and Publishing High Quality ISI Journals" by Visiting Professor, Prof Hasan U.Akay from Utili University, Turki (26/8/2012-2/9/2012) on 28th Aug 2012

□ Public Seminar / IMechE Talk Series “A Microstructure approach for Topology Optimization of Structures Using Finite Elements” by Visiting Professor, Prof Hasan U.Akay from Utili University, Turki (26/8/2012-2/9/2012) on 29th Aug 2012

□ Latest update on symposium 2013 on independent website.

□ Discussion on “Laser Spallation Technique” by Visiting Professor Dr Vijay Gupta from University of California (3/9/2012 – 4/9/2012)

□ Collaboration with Visiting Prof from Japan on 5th September 2012

□ AMMP members visit to Universitas Gadjah Mada and Institut Teknologi Bandung

SPIN OFF COMPANY—ZECTTRON

Zecttron Sdn. Bhd.

ZECTTRON Sdn Bhd

14 August 2012 – Zecttron SdnBhd has successfully presented Automatic Thermocyclic Dipping Machine (ATDM) to Cradle Fund Sdn Bhd for 3 hours and received a positive feedback from them. Cradle Fund Sdn Bhd has injected RM 150 000 to commercialize ATDM. ATDM was successfully manufactured and was bought by University Sains Islam Malaysia (USIM) on December 2011. ATDM Project is considered as a success to University of Malaya and hopefully this success will be a stepping stone for Zecttron to get more success in the future.

En Hamdan, Manager of Zecttron presenting ATDM to Cradle Fund Sdn Bhd

For further information, please visit our website at http://ammpcentre.com and http://zecttron.com